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Developing PISA-Like Math Tasks on Algebra Using Arabic Contexts

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Abstract

This development research aimed to develop valid and practical PISA-like math tasks on algebra using Arabic contexts that potentially affect mathematical literacy skills. This research was comprised of two stages, preliminary and formative evaluations. This research employed the lesson study learning community (LSLC) system in the development and implementation process and involved grade eight students aged 13-15 years old in Junior High School 19 Palembang. Data collection techniques were walkthrough, observations, and interviews, while the analysis techniques were tests. This research produced six units and nine items of PISA-like-math problems with the content characteristics using Algebra topic, Arabic personal and social contexts, levels 2, 3, 5 and 6 following the 2018 PISA framework, process competencies at mathematical literacy skills, standard language application, applicability for students, and interpret by students. To conclude, the developed PISA-like math tasks were valid, provided practicality, and potentially affected on mathematical literacy skills, and learning to confront Arabic culture in South Sumatera.

Keywords: Development Research, PISA-Like Math Tasks, Algebra, Arabic Contexts

Abstrak

Penelitian ini merupakan penelitian pengembangan yang bertujuan untuk mengembangkan soal tipe PISA pada Aljabar menggunakan *Arabian context* yang valid, praktis serta memiliki efek potensial terhadap kemampuan literasi matematika. Penelitian ini menggunakan dua tahapan yaitu: *preliminary* dan *formative evaluation*. Dalam penelitian ini juga menggunakan sistem *Lesson Study Learning Community* (LSLC) dalam proses pengembangan maupun implementasinya. Penelitain ini melibatkan siswa kelas VIII SMP Negeri 19 Palembang yang berusia 13-15 tahun. Teknik pengumpulan dan analisis data yang digunakan yaitu *walkthrough,* observasi, wawancara, dan tes. Pada penelitian ini dihasilkan 6 unit dan 9 pertanyaan soal matematika tipe PISA dengan karaktesitik konten yang menggunakan Aljabar, konteks Arabian yang meliputi konteks pribadi dan sosial, level yang sesuai dengan *framework* PISA 2018 yaitu level 2, 3, 5 dan 6, kompetensi proses yaitu kemampuan literasi matematika, penggunaan bahasa yang sesuai dengan standar bahasa, dapat diterapkan serta diinterpretasikan dengan baik oleh siswa. Sehingga, dapat disimpulkan bahwa soal matematika tipe PISA yang dikembangkan valid dan praktis serta memiliki efek potensial terhadap kemampuan literasi matematika dan kecakapan hidup dalam menghadapi keberadaan budaya Arab di wilayah Sumatera Selatan.

Kata kunci: Penelitian Pengembangan, Soal Matematika Tipe PISA, Aljabar, Konteks Arabian

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INTRODUCTION

Mathematical literacy skills constitute students' pivotal ability in the globalization era because the skills can make a person aware of the role of mathematics and solve real problems (OECD, 2019a; Jannah, Putri, & Zulkardi, 2019; Saputri & Zulkardi, 2020). However, the Indonesian students' mathematical literacy considering the 2018 PISA (Program for International Student Assessment) is relatively low because their score is 379, very far from the international average score of 489 (OECD, 2019b). One of the difficult content in mathematical literacy for students is change and relationships

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because they frequently could not identify the problem, transform real problems into mathematical structures, and interpret mathematical solutions into the real world (Simalango, Darmawijoyo, & Aisyah, 2018). Change and relationship topic in PISA is similar to Algebra topic in the 2013 curriculum.

Since few PISA-like math tasks are presented in textbooks (Ahyan, Zulkardi, & Darmawijoyo, 2014; Murtiyasa, Rejeki, & Setyaningsih, 2018). Students are less accustomed to solving PISA-like-math problems (Nizar, Putri, & Zulkardi, 2018). Maharani, Putri, & Hartono (2019) state that designing and implementing PISA-like-math tasks in learning activities are crucial because the designed problems adopt familiar contexts to help students easily understand them. This shows that PISA-like math tasks using familiar contexts students train them to solve the tasks.

PISA-like math tasks agree with the context-based Indonesian Realistic Mathematics Education (PMRI) approach (Panhuizen, & Drijvers, 2014; Jannah, Putri, & Zulkardi, 2019; Zulkardi, Putri, & Wijaya, 2020). One of the PMRI characteristics is students' contribution that enables them to use their ideas to solve problems (Gravemeijer, 1994; Zulkardi, 2002; Zulkardi, & Putri, 2010; Dewi, Putri, & Hartono, 2018). The application of these characteristics is very relevant to collaborative strategies applied through the lesson study learning community (LSLC) system (Sato, 2014; Octriana, Putri, & Nurjannah, 2019).

This research employed a distance learning mode following the government policies in the Circular of the Minister of Education and Culture (MoEC) Number 4 of 2020 in dealing with the Covid-19 pandemic. The right strategy for the distance learning mode is blended learning because it can integrate the effective use of ICT into a suitable learning process consisting of synchronous and asynchronous learning (Bath & Bourke, 2010).

The researchers were interested in developing PISA-like math tasks. Several studies have investigated the development of PISA-like math tasks using various contexts, such as Bangka (Dasaprawira, Zulkardi, & Susanti, 2019), Asian Games (Putri, & Zulkardi, 2020), sailing (Efriani, Putri, & Hapizah, 2019), Covid-19 (Nusantara, Zulkardi, & Putri, 2020a; Nusantara, Zulkardi, & Putri, 2021) and physical social distancing (Nusantara, Zulkardi, & Putri, 2020b). However, there has been no research developing PISA-like math tasks using Arabic contexts. Therefore, this research employed the Arabic contexts due to three reasons; (1) many Arab tribes lived in South Sumatra, (2) their culture is famous, and (3) some of their cultures, such as al-Munawwar village and Kubro Pilgrimage, were adopted as the cultural heritage by the South Sumatera Government. This research aimed to develop valid and practical PISA-like math tasks on Algebra using Arabic contexts that potentially affected mathematical literacy skills.

METHODS

This research aimed to develop valid and practical PISA-like math tasks on Algebra using Arabic contexts that potentially affected mathematical literacy skills. The research involved class eight students aged 13-15 years old of Junior High School 19 Palembang. This development research consisted of 2 stages: preliminary and formative evaluation (Tessmer, 1993; Zulkardi, 2006).

Furthermore, this research employed the LSLC system in the development and implementation processes consisting of several stages. First, the planning stage included preliminary, self-evaluation, expert review, and one-to-one stage. Second, the do stage included the small group stage and field test. Third, the see or reflection stage was an evaluation activity prosecuted after the learning process. Fourth, the redesign stage referred to the process of revising the prototype in each stage.

In the preliminary stage, the researchers conducted a literature review, designed PISA-like math tasks on Algebra using Arabic contexts and other required research instruments, discussed the designed PISA-like math tasks with two peers collaboratively on a WhatsApp group. In addition, validity and reliability tests were conducted to review the validity of the problems from an empirical perspective and the consistency or reliability of the developed PISA-like math tasks. The validity and reliability test involved 26 students of class VIII.1-VIII.4.

The formative evaluation stage consisted of self-evaluation, expert-review, one-to-one stage, small group, and field tests. In the self-evaluation stage, the researchers evaluated the developed PISA-like math tasks by considering the results of peer discussions and further evaluations. Then, the researchers revised the problems to create prototype 1. The expert review and one-to-one test were conducted simultaneously to validate prototype 1, in terms of content, construct, and language. The validation involved three experts from Mathematics Education lecturers at Universitas Pendidikan Indonesia, University of Singaperbangsa Karawang, and Universitas Sriwijaya. The one-to-one test assessed prototype 1 by involving three students of class VIII.7 with high, medium, and low abilities. Then, the results from these two stages were combined and used to revise prototype 1 to prototype 2. The next stage was creating a small group involving eight students of class VIII.6 to review the practicality of the developed PISA-like math tasks and revise prototype 2 into prototype 3. meanwhile, the field test involved 27 students of class VIII.9 to investigate the potential effects of the developed PISA-like math tasks on mathematical literacy skills.

The data collection techniques of this study were walkthroughs, observations, interviews, and tests. The collected data were then analyzed qualitatively, except the data from the validity and reliability tests. Validity and reliability results were analyzed using SPSS. The PISA-like math tasks are considered empirically valid if the calculated correlation value is higher than the correlation value in the table; the PISA-like math tasks are considered empirically reliable if the Cronbach alpha value is bigger than 0.6 (Ghozali, 2011).

RESULTS AND DISCUSSION

This research invented valid and practical PISA-like-math tasks on Algebra using Arabic contexts that potentially affected mathematical literacy skills. The tasks consisted of six units: a trip to two Arabic villages (1 item), Al-Munawwar tourist village (2 items), tambourine (1 item), *Kubro* pilgrimage (1 item), Arabic robe (2 items), and *mandhi* rice dish (2 items). However, the researchers made the tambourine and *mandhi* rice dish units as representations of the development process.

Preliminary

In the preliminary stage, the researchers conducted a literature review, analyzed the curriculum, and investigated the 2018 PISA framework. The next step was designing PISA-like-math tasks on Algebra using Arabic contexts, considering the characteristics of PISA problems in the 2018 PISA framework and other required research instruments. Then, the researchers discussed the PISA-like math tasks with two peers by considering the LSLC principles on WhatsApp (Octriana, Putri, & Nurjannah, 2019). Then, the validity and reliability tests were conducted in 26 students of class VIII.1-4 of Junior High School 19 Palembang. The validity test aimed to review the validity of PISA-like-math problems developed from an empirical perspective. Meanwhile, the reliability test aimed to review the consistency or reliability of the developed PISA-like-math problems. Validity and reliability tests were analyzed using SPSS. The correlations of ten items in the validity test are presented in the following figure.

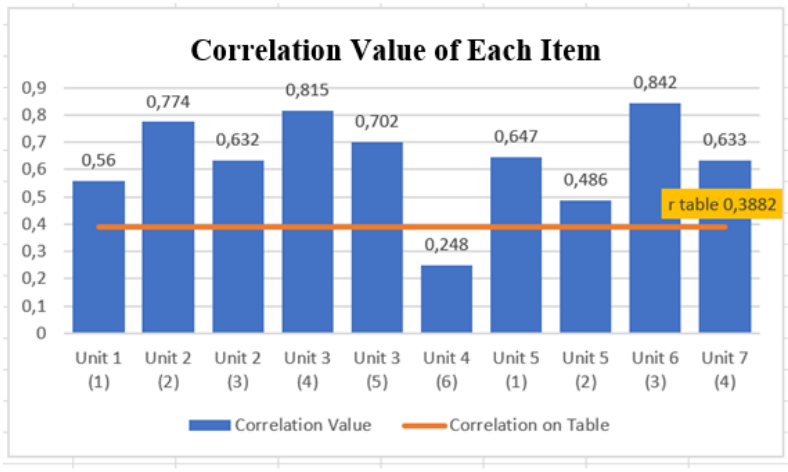


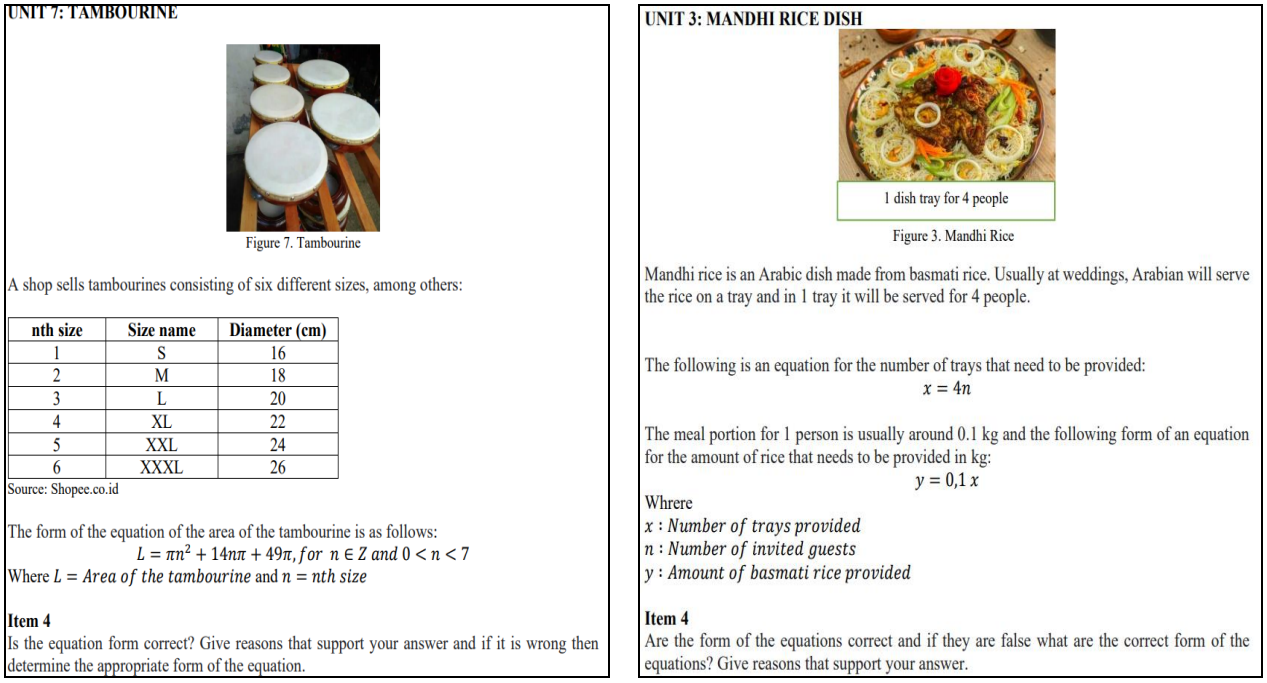
Figure 1. The analyze of validity test result

Figure 1 shows that unit 1 describes a trip to two Arabic villages context. Unit 2 is Al-Munawwar tourist village context, unit 3 is *mandhi* rice dish context, unit 4 is Arabic woe context, unit 5 is Arabic robe context, unit 6 is *kubro* pilgrimage context, and unit 7 is tambourine context. Figure 1 denotes that the Arabic woe of item 4 was empirically invalid because its correlation value was fewer than the correlation value on the table (0.3882). Therefore, this problem could not be applied to students. In addition, the reliability test on the PISA-like math tasks using SPSS of a

Cronbach alpha value obtained 0.83. Since this value was greater than 0.6, the developed PISA-like math tasks were reliable or consistent.

Self-Evaluation

In this stage, the developed researchers revised the PISA-like-math tasks following the results of collaborative discussions with two colleagues. Then, the researchers reevaluated the PISA-like-math problems and revised them again to investigate any existing shortcomings. As a result, prototype 1 was manufactured and consisted of six units and nine items. Prototype 1 of PISA-like-math problems for the tambourine and *mandhi* rice dish units is presented in the following figure.



UNIT 7: TAMBOURINE

Figure 7. Tambourine

A shop sells tambourines consisting of six different sizes, among others:

nth size	Size name	Diameter (cm)
1	S	16
2	M	18
3	L	20
4	XL	22
5	XXL	24
6	XXXL	26

Source: Shopee.co.id

The form of the equation of the area of the tambourine is as follows:

$$L = \pi n^2 + 14n\pi + 49\pi, for\ n \in Z\ and\ 0 < n < 7$$

Where $L = Area\ of\ the\ tambourine$ and $n = nth\ size$

Item 4

Is the equation form correct? Give reasons that support your answer and if it is wrong then determine the appropriate form of the equation.

(a)

UNIT 3: MANDHI RICE DISH

1 dish tray for 4 people

Figure 3. Mandhi Rice

Mandhi rice is an Arabic dish made from basmati rice. Usually at weddings, Arabian will serve the rice on a tray and in 1 tray it will be served for 4 people.

The following is an equation for the number of trays that need to be provided:

$$x = 4n$$

The meal portion for 1 person is usually around 0.1 kg and the following form of an equation for the amount of rice that needs to be provided in kg:

$$y = 0{,}1\,x$$

Whrere

x : *Number of trays provided*

n : *Number of invited guests*

y : *Amount of basmati rice provided*

Item 4

Are the form of the equations correct and if they are false what are the correct form of the equations? Give reasons that support your answer.

(b)

Figure 2. Prototype 1 of PISA-like math tasks developed

Figure 2 (a) signifies prototype 1 of PISA-like math tasks using a tambourine unit. The students were asked to assess the area equation for the tambourine presented on the problem. Meanwhile, Figure 2 (b) presents prototype 1 of PISA-like math tasks using *mandhi* rice dish unit. The students were asked to assess the correct equation forms of the number of trays and the amount of rice to be provided, which were presented on the problem.

Expert Review and One-to-One

This stage aimed to explore the validity of the content, construct, and language of the developed PISA-like-math tasks. The two stages were conducted concurrently. In the expert review, the content, construct, and language aspects of prototype 1 were validated by three experts. Meanwhile, in the

one-to-one stage, three students of class VIII.7 Junior High School 19 Palembang with high, medium, and low abilities assessed prototype 1 by commenting it. Table 1 summarizes some of the experts' and students' comments on PISA-like-math tasks about tambourine and *mandhi* rice dish units.

Table 1. The experts' and students' comments on tambourine and *mandhi* rice units

Validation	Comments	Revision
Experts	• On the tambourine unit, item 4 contains 2 questions. These questions should be separated. • On the *mandhi* rice dish unit, the reading information is necessarily rearranged because it probably traps students' answers. The information on the meal portion of 0.1 kg of rice should be deleted.	• The tambourine unit in item 4 needs some changes. Thus, it does not contain two questions. Then, the Z symbol is replaced with the word 'integer.' • The reading information and item 4 in the *mandhi* rice dish unit are necessarily rearranged. Besides, the formula for the portion of basmati rice should be deleted. Thus, the students will not get confused.
Students	• I don't understand the use of symbols, especially the Z symbol in the equations, presented in the tambourine unit. • I don't understand item 4 in the *mandhi* rice dish unit.	

Table 1 presents the experts' comments on the content, construct, and language aspects. Moreover, Table 1 shows the students' understanding, completion, and comments in the one-to-one stage. These findings were used as material to revise prototype 1 to prototype 2. One of the items was omitted because of the validity test result (Figure 1). Thus, only six units and nine items were assessed valid based on the content, construct, and language aspects (Zulkardi, 2002). The first was content aspects consisting of the characteristics of changes and relationship between contents using Algebra topics and Arabic personal and social contexts. The second was construct aspects comprising of characteristics of the suitability levels 2, 3, 5, and 6 of the 2018 PISA framework, the competence processes of mathematical literacy skills (communication, mathematization, representation, argumentation, and reasoning), the use of strategies in problem-solving, and the use of symbolic, formal, and technical language and operations. The third was language aspects, including the characteristics of suitable language with standard language and concise meaning.

Small Group

The Small group comprised of eight students of class VIII.6 Junior High School 19 Palembang. They were divided into two groups, and each group consisted of one high-ability student, two medium-ability students, and one low-ability student. The small group consists of synchronous learning, asynchronous learning, and written tests. The learning process employed the PMRI approach, the LSLC system, and blended learning strategies. The synchronous learning was conducted through the virtual face-to-face meeting on Zoom. In this stage, the students discussed three items of the developed PISA-like math tasks collaboratively; these items were the unit of a trip to two Arabic villages (one item) and the unit of the Al-Munawwar tourist village (two items). The asynchronous learning consisted of independent learning in which each group discussed two items of the developed PISA-like math tasks collaboratively on the WhatsApp group. The two items were the tambourine unit (1 item) and the *kubro* pilgrimage unit (1 item). The next step was conducting an individual written test on Google Form. The test assessed four items: the Arabic robe unit (two items) and the *mandhi* rice dish unit (two items).

The small group in the synchronous learning, asynchronous learning, and written tests revealed that the developed PISA-like math tasks were applicable because the students' could understand the PISA-like math tasks -comprehensively integrated the tasks with their strategies to answer the PISA-like math tasks. Thus, the developed PISA-like math tasks, consisting of six units and nine items, were assessed practical (Akker, 1999; Zulkardi, 2006). The results of the small group were also employed to revise prototype 2 to prototype 3. Prototype 3 of the developed PISA-like math tasks for the tambourine unit and *mandhi* rice dish unit is presented in figure 3.

UNIT 3: TAMBOURINE

Figure 2. Tambourine

A shop sells tambourines consisting of six different sizes, among others:

nth size	Size name	Diameter (cm)
1	S	16
2	M	18
3	L	20
4	XL	22
5	XXL	24
6	XXXL	26

Source: Shopee.co.id

The formula for the area of the tambourine is as follows:

$$L = \pi n^2 + 14n\pi + 49\pi, for\ n \in integer\ and\ 0 < n < 7$$

Where $L = Area\ of\ the\ tambourine$ and $n = nth\ size$

Item 4

Is the formula true or false? Prove your answer

(a)

UNIT 6: MANDHI RICE DISH

1 dish tray for 4 people

Figure 5. Mandhi Rice

Mandhi rice is an Arabian food made from basmati rice. Usually at weddings, Arabian will serve the rice on a tray and in 1 tray it will be served for 4 people

The following formula for the number of trays that need to be provided:

$$x = 4n$$

Where

x : *Number of trays provided*

n : *Number of invited guests*

Item 3

Is the formula true or false? Give reasons that support your answer.

(b)

Figure 3. Prototype 3 of PISA-like math tasks developed

Figure 3 (a) shows prototype 3 of the PISA-like math task using a tambourine unit. Prototype 1 (Figure 2 (a)) and prototype 3 had a difference in the use of symbols for the tambourine area formula and the sentence of item 4. Meanwhile, Figure 3 (b) illustrates prototype 1 of the PISA-like math task using *mandhi* rice dish. The figure shows that prototype 1 (Figure 2 (b)) and prototype 3 had differences in abolishing the formula for the amount of rice needed and changing the sentence of item 3.

Field Test

This stage involved 27 students of class VIII.9 Junior High School 19 Palembang. The students were divided into four groups, and each group consisted of 4 people: one high-ability student, 2 medium-ability students, and 1 low-ability student. This stage aimed to investigate the potential effects of PISA-like math tasks on mathematical literacy skills. Then, the valid and practical units and items of PISA-like math tasks were applied in synchronous learning, asynchronous learning, and written tests. The mechanism of this application was similar to the implementation of the small groups. The model teacher in the field test stage was Mery Johan, S.Si., M.Si.

The synchronous learning was conducted through face-to-face meetings on Zoom. The students discussed the unit of a trip to two Arabic villages (1 item) and the unit of Al-Munawwar tourist village (2 items). The results of one group discussion using the collaborative strategy are summarized in Figure 4.

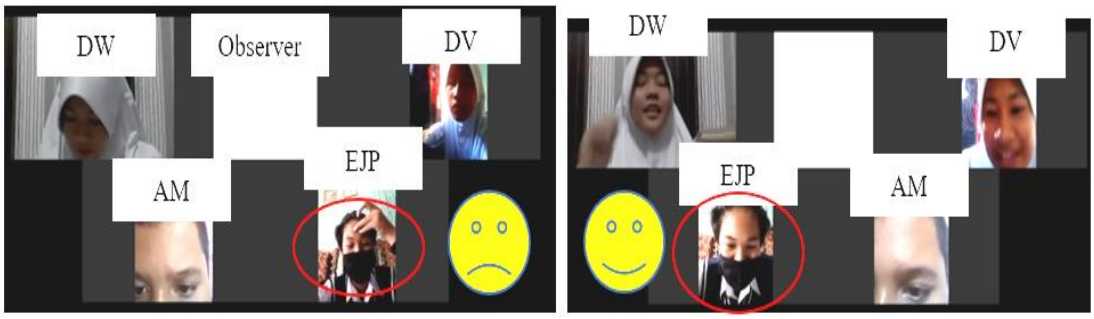


Figure 4. Collaborative discussion at the synchronous learning on field test stage

Figure 4 presents the "please teach me" culture (Sato, 2014; Putri, & Zulkardi, 2020). In the beginning, the students seemed to find difficulties in understanding and solving the problems of Al-Munawwar tourist village unit. This condition was depicted by one of the students, namely EJP. He scratched his forehead several times and showed restless movements. However, when he asked his friend to "teach him" the problems, DW explained it and informed the problem-solving. EJP began to understand the explanation of his groupmate indicated by smiling and sharpening his eyes (Octriana, Putri, & Nurjannah, 2019). Another student AM was not actively involved in the discussions and was always too close to the camera screen. However, when his friend asked if he had understood, he replied that he understood his friend's explanation.

In asynchronous learning, students did collaborative discussions independently on WhatsApp. Each group was added into a different WhatsApp group and consisted of model teachers, one researcher, observers, and group members. The students worked on the tambourine unit (one item) and *kubro* pilgrimage unit (one item) In this activity. One of the groups' discussions is illustrated in Figure 5.

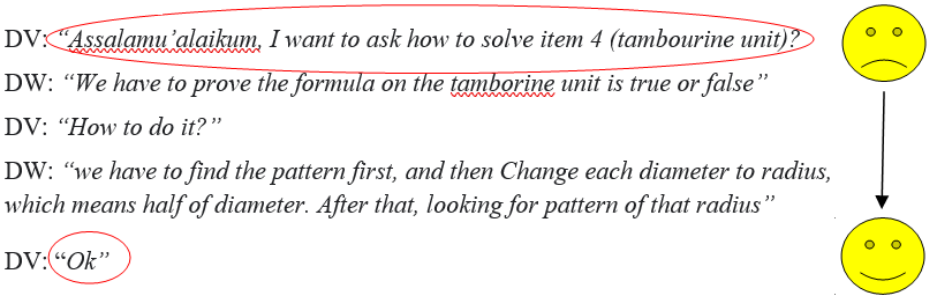
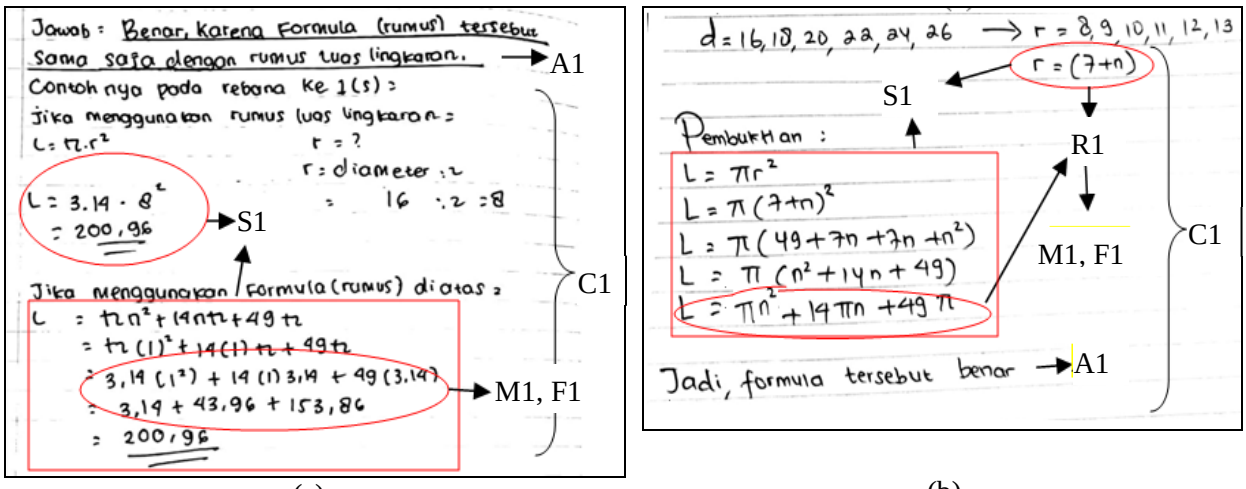


Figure 5. Collaborative discussion at the asynchronous learning via whatsapp chat

Figure 5 shows a collaborative discussion from the communication and interaction (Stoerger, 2008) between DV and DW. The discussion covered the "please teach me" culture (Sato, 2014; Putri & Zulkardi, 2020). The description showed that DV did not understand how to solve the tambourine unit of item 4 and asked her group members to explain it. DW was one of the students who explained it to DV. Finally, DV showed that she could understand DW's explanation.

Furthermore, the written test was conducted on a Google Form filled in by the students individually. The tested PISA-like-math tasks were the Arabic robe unit (2 items) and *mandhi* rice dish (2 items).

Collaborative learning builds students' confidence to solve mathematical problems (Laal & Ghosdi, 2012), including mathematical literacy skills. Figure 6 summarizes an example of a students' answer to solve PISA-like math tasks for the tambourine unit of item 4 (Figure 5) and the *mandhi* rice dish unit of item 3 (Figure 6).



(a) (b)

Figure 6. Students' answer of PISA-like-math problem for tambourine unit

Figure 6 showed that the students used different strategy formulas for solving problems (S1). The formulation of these strategies agreed with the information or problems identified in PISA-like math tasks; and each student could use different strategies to solve the PISA-like math tasks (Dasaprawira, Zulkardi, & Susanti, 2019; Nusantara, Zulkardi, & Putri, 2020b).

Figure 6 (a) illustrates that the students communicated (C1) their answers using their representation skills (R1) by representing the pattern of the tambourine's size and using it to represent the formula for the tambourine area. This representation denoted that students' could mathematize real problems by identifying the r (radius) and n (tambourine size-th) variables and applying a symbolic and formal language (F1) with r and n variables to represent the tambourine radius' pattern. Moreover, This representation described that the students could draw assumptions by substituting the tambourine radius' pattern into the formula for the circle area. As a result, they discovered the correct formula for the tambourine area. These activities explained that students had performed the mathematization process by understanding real problems, changing real problems into mathematical problems, and solving mathematical problems (Nusantara, Zulkardi, & Putri, 2020b). After that, the students utilized their arguments and reasoning skills (A1) by justifying that the formula for the tambourine area presented in the problem was correct, as evidenced by the calculation process. This justification agrees with Nusantara, Zulkardi, & Putri (2020a), postulating that students with good arguments and reasoning skills can understand, formulate, and solve PISA-like math tasks.

Meanwhile, Figure 6 (b) describes that the students communicated (C1) their answers without making any representations. They calculated the area of the first size tambourine using the formula for the circle area because the tambourine's shape is identical to a circle. Then, they calculated the area of the first size tambourine using the formula in the problem. The result showed that they could do mathematization (M1) by identifying the n variable (size-th tambourine). Then, the students' ability to use the symbolic, formal, and technical language and operations (F1) was shown by involving the variable n and substituting the value of n (n = 1) to reveal the area of the first size tambourine. After that, they used their arguments and reasoning skills (A1) to justify that the formula for the tambourine area in the problem was correct by comparing the results of calculating the area of the first tambourine using the formula for the circle area with the formula for the tambourine area in the problem. They could justify the formula because they could use mathematical logical relationships (Nusantara, Zulkardi, & Putri, 2021).

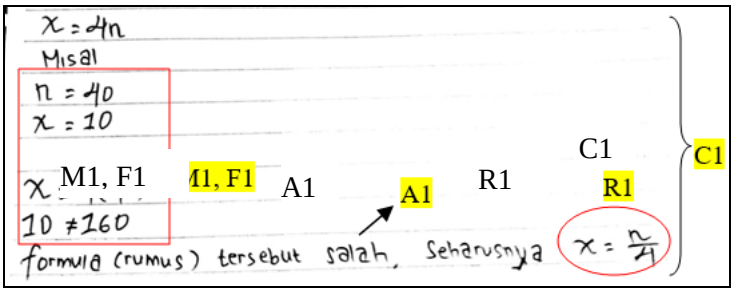


Figure 7. Students' answer of PISA-like-math problem for mandhi rice dish unit

Figure 7 illustrates that the student communicated (C1) his answer using his mathematization skills (M1), such as making assumptions that the number of guests was 40 people and the number of trays needed was ten people. This assumption was made based on his background knowledge that one tray of *mandhi* rice was served for four invited guests. This finding indicated that the student could apply symbolic, formal, and technical language and operations (F1) by substituting the variables n (number of guests) and x (number of trays provided). Moreover, he could make the assumption and discover the correct formula for the number of trays provided. Then, the student used his argument and reasoning skills (A1) to justify that the formula for the number of trays provided is incorrect based on his proof. He also used his representation skill (R1) to represent the correct formula for the number of trays compulsorily provided. This finding agreed with Efriani, Putri, & Hapizah (2019), deploying that students translated problems into mathematical statements through representations.

The analysis of student answers revealed that using Arabic context in PISA-like math tasks potentially affected mathematical literacy skills (communication, mathematization, representation, argumentation, and reasoning) using the problem-solving strategies and symbolic, formal, and technical language and operations. This finding agrees with Putri & Zulkardi (2020), stating that selecting the right context and using collaborative strategies in learning allowed students to use their abilities to solve problems. The use of Arabic contexts affected students' life skills in dealing with the Arabic culture in South Sumatra. For example, the students understand that different sizes of tambourine, an Arabic musical instrument, were used by a group of people to sing religious songs, and a tray of rice dishes for *mandhi* rice was used during the Arabic events.

CONCLUSION

This research established six units and nine items of valid and practical PISA-like math tasks that potentially affected mathematical literacy skills. The criteria of the developed PISA-like math tasks focused on change and relationship contents, such as algebra topics and levels 2, 3, 5, and 6 of Arabian context problems. Learning Arabic cultures through PISA-like math tasks enabled the students to use their mathematical literacy skills, such as communication, mathematization, representation, argumentation, and reasoning, to solve the problems using the strategy on the problems. Besides, the students applied their knowledge and logical thinking to Arabic culture. For example, understanding various sizes of the tambourine and the provision of *mandhi* rice dishes used in Arabic events. Therefore, the students could learn how to deal with the increasingly widespread Arabic culture in South Sumatra while using their mathematical literacy skills.

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